Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	4067	d adj (amino acid or aspartate) adj oxidase$ or dao or ddo or daao	US-PGPUB; USPAT	ADJ	OFF	2005/01/13 10:55
S2	36	S1 near8 inhibit$	US-PGPUB; USPAT	ADJ	OFF	2005/01/11 16:19
S3	5	S1 same (schizophrenia or dression or bipolar)	US-PGPUB; USPAT	ADJ	OFF	2005/01/11 16:03
S4	4071	d adj (amino acid or aspartate) adj oxidase$ or dao or ddo or daao	US-PGPUB; USPAT	ADJ	OFF	2005/01/13 11:17
S5	5	S4 same depression	US-PGPUB; USPAT	ADJ	OFF	2005/01/13 11:17

PGPUB-DOCUMENT-NUMBER: 20050004104

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050004104 A1

TITLE: Methods for the protection of memory and cognition

PUBLICATION-DATE: January 6, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Cali, Brian M.	Arlington	MA	US	
Chien, Yueh-Tyng	Newton	MA	US	
Currie, Mark G.	Sterling	MA	US	
Talley, John Jeffrey	Somerville	MA	US	
Zimmerman, Craig	Topsfield	MA	US	

APPL-NO: 10/ 859335

DATE FILED: June 1, 2004

RELATED-US-APPL-DATA:

non-provisional-of-provisional 60475204 20030530 US

US-CL-CURRENT: 514/217.09, 514/323 , 514/414 , 514/419

ABSTRACT:

The invention features certain compounds useful in the treatment of memory disorders, i.e., they reduce or delay memory loss or they enhance memory retention. Because certain of the compounds do not substantially inhibit either COX-1 or COX-2 at therapeutically relevant doses, these compounds are far less likely to cause gastrointestinal ulceration than is indomethacin, which is known to inhibit both COX-1 and COX-2. Certain of the compounds inhibit the activity of DAO at therapeutically relevant doses. Among the memory disorders that can be treated are AD, mild cognitive impairment (MCI; a common precursor to AD), and memory loss or cognitive impairment associated with vascular dementias, amnesia, dementia, AIDS dementia, Huntington's Disease, hydrocephalus, depression, Pick's Disease, Creutzfeldt-Jakob Syndrome, electroconvulsive therapy, or Parkinson's Disease.

CLAIM OF PRIORITY

[0001] This application claims priority under 35 USC .sctn. 119(e) to U.S. Patent Application Ser. No. 60/475,204, filed on May 30, 2003, the entire contents of which is hereby incorporated by reference.

---------- KWIC ---------

Abstract Paragraph - ABTX (1):

The invention features certain compounds useful in the treatment of memory disorders, i.e., they reduce or delay memory loss or they enhance memory retention. Because certain of the compounds do not substantially inhibit either COX-1 or COX-2 at therapeutically relevant doses, these compounds are far less likely to cause gastrointestinal ulceration than is indomethacin,

which is known to inhibit both COX-1 and COX-2. Certain of the compounds inhibit the activity of DAO at therapeutically relevant doses. Among the memory disorders that can be treated are AD, mild cognitive impairment (MCI; a common precursor to AD), and memory loss or cognitive impairment associated with vascular dementias, amnesia, dementia, AIDS dementia, Huntington's Disease, hydrocephalus, depression, Pick's Disease, Creutzfeldt-Jakob Syndrome, electroconvulsive therapy, or Parkinson's Disease.

Summary of Invention Paragraph - BSTX (11):

[0009] The invention features certain compounds useful in the treatment of memory disorders, i.e., they reduce or delay memory loss or they enhance memory retention. Because certain of the compounds do not substantially inhibit either COX-1 or COX-2 at therapeutically relevant doses, these compounds are far less likely to cause gastrointestinal ulceration than is indomethacin, which is known to inhibit both COX-1 and COX-2. Certain of the compounds inhibit the activity of DAO at therapeutically relevant doses. Among the memory disorders that can be treated are AD, mild cognitive impairment (MCI; a common precursor to AD), and memory loss or cognitive impairment associated with vascular dementias, amnesia, dementia, AIDS dementia, Huntington's Disease, hydrocephalus, depression, Pick's Disease, Creutzfeldt-Jakob Syndrome, electroconvulsive therapy, or Parkinson's Disease.

PGPUB-DOCUMENT-NUMBER: 20030185754

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030185754 A1

TITLE: Treatment of CNS disorders using D-amino acid oxidase and D-aspartate oxidase antagonists

PUBLICATION-DATE: October 2, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Cohen, Daniel	Paris		FR	
Chumakov, Ilya	Vaux-le-Penil		FR	

APPL-NO: 10/ 051681

DATE FILED: January 16, 2002

RELATED-US-APPL-DATA:

non-provisional-of-provisional 60261883 20010116 US

non-provisional-of-provisional 60305445 20010713 US

non-provisional-of-provisional 60333881 20011119 US

US-CL-CURRENT: 424/9.2, 800/3

ABSTRACT:

Compounds that are antagonists of D-amino acid oxidase and D-aspartate oxidase, methods of treating CNS disorders including bipolar disorder, psychosis and schizophrenia using the compounds, and pharmaceutically acceptable compositions that contain the antagonists are disclosed.

RELATED APPLICATIONS

[0001] This application claims priority from U.S. Provisional Patent Application Serial Nos. 60/261,883, filed Jan. 16, 2001; 60/305,445, filed Jul. 13, 2001; 60/___,___, filed Oct. 22, 2001; and 60/333,881 filed Nov. 19, 2001, which disclosures are hereby incorporated by reference in their entireties.

---------- KWIC ---------

Summary of Invention Paragraph - BSTX (2):

[0002] This invention provides means to identify compounds useful in the treatment of CNS-related disorders such as schizophrenia, bipolar disorder, depression and other mood disorders, means to determine the predisposition of individuals to said disorders, as well as means for the disease diagnosis and prognosis of said disorders. More specifically, this invention relates to means of treating said disorders using antagonists of D-amino acid oxidase (DAO) and D-aspartate oxidase (DDO).

Summary of Invention Paragraph - BSTX (55):

[0054] For CNS disorders such as schizophrenia, bipolar disorder, depression and other mood disorders, all the known molecules used for treatment have side effects and act only against the symptoms of the disease. There is a strong need for new molecules without associated side effects or reduced side effects which are directed against targets that are involved in the causal mechanisms of such CNS disorders. It would be desirable to provide a useful method for the prevention and treatment of such CNS disorders by administering a DAO antagonist compound to a patient susceptible to or suffering from such a disorder. Alternatively, it would be desirable to provide a useful method for the prevention and treatment of such CNS disorders by administering a DDO antagonist compound to a patient susceptible to or suffering from such a disorder.

Summary of Invention Paragraph - BSTX (79):

[0077] As noted above, certain aspects of the present invention stem from the identification of genetic associations between schizophrenia and bipolar disorder and alleles of biallelic markers of g34872 gene and the DAO gene. The invention provides appropriate tools for establishing further genetic associations between alleles of biallelic markers in the g34872 and DAO locus and either side effects or benefit resulting from the administration of agents acting on CNS disorders or symptoms such as schizophrenia, depression or bipolar disorder, or schizophrenia or bipolar disorder symptoms, includng agents like chlorpromazine, clozapine, risperidone, olanzapine, sertindole, quetiapine and ziprasidone.

Summary of Invention Paragraph - BSTX (270):

[0268] In one aspect the invention discloses a method of identifying or assessing a candidate molecule for the treatment of a CNS disorder, said method comprising: (a) providing a test DAO-inhibitor or DDO-inhibitor compound; and (b) administering said compound to an animal model of schizophrenia, depression or bipolar disorder, wherein a determination that said compound ameliorates a representative characteristic of a CNS disorder in said animal model indicates that said compound is a candidate molecule for the treatment of a CNS disorder. Also encompassed is a method of identifying or assessing a candidate molecule for the treatment of a CNS disorder, said method comprising: contacting a DAO or DDO polypeptide or a biologically active fragment thereof with a test compound; (a) determining whether said compound (i) binds to said polypeptide, or (ii) inhibits the activity of said polypeptide; and (b) if said compound binds to said polypeptide or inhibits said polypeptide, administering said compound to an animal model of schizophrenia, depression or bipolar disorder, wherein a determination that said compound ameliorates a representative characteristic of CNS disorder in said animal model indicates that said compound is a candidate molecule for the treatment of a CNS disorder. Preferably said CNS disorder is psychotic disorder. Most preferably said CNS disorder is depression, bipolar disorder, or schizophrenia.

Detail Description Paragraph - DETX (29):

[0344] The terms "antagonist" and "inhibitor" are considered to be synomous and can be used interchangeably throughout the disclosure. The "antagonist" compounds of the invention may be administered together with a typical or atypical anti-CNS disorder drug, such as an antipsychotic drug. Typical antipsychotics include: haloperidol, fluphenazine, perphenazine, chlorpromazine, molindone, pimozide, trifluoperazine and thioridazine, thiadiazole, oxadiazole and others. Atypical antipsychotics include: clozapine, risperidone, olanzapine, sertindole, M100907, ziprasidone, seroquel, zotepine, amisulpride, iloperidone, phenelzine and others. Typical antidepressant and anti-anxiety agents include: heterocyclic antidepressants (TCAs, tetracyclics, and the like), SSRIs, mixed serotonin and norepinephrine reuptake inhibitors, dopamine reuptake inhibitors and MAOIs. The antagonists

may also be used to treat individuals for whom the above drugs are contraindicated. The present invention also provides a method for the treatment or prevention of schizophrenia, bipolar disorder, or other CNS disorders without concomitant therapy with other antipsychotic, antidepressant, anti-anxiety, or other drugs, in a patient who is non-responsive. The antipsychotic, antidepressant, anti-anxiety, or other drugs may be administered at a subtherapeutic doses, i.e., at a lower dose than the dosage that is typically used for treatments with the above drugs alone. Drugs used for the treatment of schizophrenia, bipolar disorder, depression, and other CNS disorders, that are either recognized as a DAO or DDO inhibitor or that inherently act as an inhibitor of DAO or DDO are specifically excluded from the definition of DAO or DDO "antagonist" and may be specifically excluded from the present invention. Further, any molecule, compound or drug disclosed herein may be specifically excluded from the invention.

Detail Description Paragraph - DETX (502):

[0810] Validated polymorphisms (occurring at a frequency of >5% in the general population) have been discovered in the DAO gene (SEQ ID NO: 1). These polymorphisms, also referred to as Biallelic markers, are represented by SEQ ID NOs: 23-26 and by numbers 24/1443-126, 24/1457-52, 27/93-181, and 24/1461-256, respectively, wherein the polymorphic base is located at position 24. Polynucleotides comprising amplicons and microsequencing primers for detecting each DAO biallelic marker of the invention are described in SEQ ID NO: 1. As shown in FIG. 6, Marker 27-93/181(SEQ ID NO: 25) and 24-1461/256 (SEQ ID NO: 26) have been determined to be significantly associated with schizophrenia p=0.0066 and 0.0111, respectively. Markers of the invention can be further used to determine if an individual is at risk for schizophrenia, as demonstrated in FIG. 6, as well as other related CNS disorders, preferably depression and bipolar disorder.

Claims Text - CLTX (11):

10. A method of diagnosing, detecting a predisposition to or susceptibility to schizophrenia, depression or bipolar disorder in a subject, comprising (a) obtaining a nucleic acid sample from said subject; and (b) determining the identity of a nucleotide at a DAO-related polymorphism, or the complement thereof in said biological sample.

Claims Text - CLTX (14):

13. A method of identifying a candidate molecule for the treatment of a CNS disorder, said method comprising: (a) contacting a DAO or DDO polypeptide or a biologically active fragment thereof with a test compound; (b) determining whether said compound (i) binds to said polypeptide, or (ii) inhibits the activity of said polypeptide; and (c) if said compound binds to said polypeptide or inhibits said polypeptide, administering said compound to an animal model of schizophrenia, depression or bipolar disorder, wherein a determination that said compound ameliorates a characteristic representative of CNS disorder in said animal model indicates that said compound is a candidate molecule for the treatment of a CNS disorder.

PGPUB-DOCUMENT-NUMBER: 20030166554

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030166554 A1

TITLE: Treatment of CNS disorders using D-amino acid oxidase and D-aspartate oxidase antagonists

PUBLICATION-DATE: September 4, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Cohen, Daniel	Paris		FR	
Chumakov, Ilya	Vaux-le-Penil		FR	

APPL-NO: 10/ 211160

DATE FILED: August 1, 2002

RELATED-US-APPL-DATA:

child 10211160 A1 20020801

parent continuation-in-part-of 10051681 20020116 US PENDING

non-provisional-of-provisional 60261883 20010116 US

non-provisional-of-provisional 60305445 20010713 US

non-provisional-of-provisional 60345211 20011022 US

non-provisional-of-provisional 60333881 20011119 US

US-CL-CURRENT: 514/12, 424/9.2 , 514/227.5 , 514/231.5 , 514/253.01 , 514/340 , 514/357 , 514/89 , 800/3

ABSTRACT:

Compounds that are antagonists of D-amino acid oxidase and D-aspartate oxidase, methods of treating CNS disorders including bipolar disorder, psychosis and schizophrenia using the compounds, and pharmaceutically acceptable compositions that contain the antagonists are disclosed.

RELATED APPLICATIONS

[0001] This application is a continuation-in-part of U.S. Ser. No. 10/051,681 claims priority from U.S. Provisional Patent Application Serial Nos. 60/261,883, filed Jan. 16, 2001; 60/305,445, filed Jul. 13, 2001; 60/345,211, filed Oct. 22, 2001; and 60/333,881 filed Nov. 19, 2001, which disclosures are hereby incorporated by reference in their entireties.

---------- KWIC ---------

Summary of Invention Paragraph - BSTX (2):

[0002] This invention provides means to identify compounds useful in the treatment of CNS-related disorders such as schizophrenia, bipolar disorder,

depression and other mood disorders, means to determine the predisposition of individuals to said disorders, as well as means for the disease diagnosis and prognosis of said disorders. More specifically, this invention relates to means of treating said disorders using antagonists of D-amino acid oxidase (DAO) and D-aspartate oxidase (DDO).

Summary of Invention Paragraph - BSTX (55):

[0054] For CNS disorders such as schizophrenia, bipolar disorder, depression and other mood disorders, all the known molecules used for treatment have side effects and act only against the symptoms of the disease. There is a strong need for new molecules without associated side effects or reduced side effects which are directed against targets that are involved in the causal mechanisms of such CNS disorders. It would be desirable to provide a useful method for the prevention and treatment of such CNS disorders by administering a DAO antagonist compound to a patient susceptible to or suffering from such a disorder. Alternatively, it would be desirable to provide a useful method for the prevention and treatment of such CNS disorders by administering a DDO antagonist compound to a patient susceptible to or suffering from such a disorder.

Summary of Invention Paragraph - BSTX (79):

[0077] As noted above, certain aspects of the present invention stem from the identification of genetic associations between schizophrenia and bipolar disorder and alleles of biallelic markers of g34872 gene and the DAO gene. The invention provides appropriate tools for establishing further genetic associations between alleles of biallelic markers in the g34872 and DAO locus and either side effects or benefit resulting from the administration of agents acting on CNS disorders or symptoms such as schizophrenia, depression or bipolar disorder, or schizophrenia or bipolar disorder symptoms, includng agents like chlorpromazine, clozapine, risperidone, olanzapine, sertindole, quetiapine and ziprasidone.

Summary of Invention Paragraph - BSTX (270):

[0268] In one aspect the invention discloses a method of identifying or assessing a candidate molecule for the treatment of a CNS disorder, said method comprising: (a) providing a test DAO-inhibitor or DDO-inhibitor compound; and (b) administering said compound to an animal model of schizophrenia, depression or bipolar disorder, wherein a determination that said compound ameliorates a representative characteristic of a CNS disorder in said animal model indicates that said compound is a candidate molecule for the treatment of a CNS disorder. Also encompassed is a method of identifying or assessing a candidate molecule for the treatment of a CNS disorder, said method comprising: contacting a DAO or DDO polypeptide or a biologically active fragment thereof with a test compound; (a) determining whether said compound (i) binds to said polypeptide, or (ii) inhibits the activity of said polypeptide; and (b) if said compound binds to said polypeptide or inhibits said polypeptide, administering said compound to an animal model of schizophrenia, depression or bipolar disorder, wherein a determination that said compound ameliorates a representative characteristic of CNS disorder in said animal model indicates that said compound is a candidate molecule for the treatment of a CNS disorder. Preferably said CNS disorder is psychotic disorder. Most preferably said CNS disorder is depression, bipolar disorder, or schizophrenia.

Detail Description Paragraph - DETX (29):

[0344] The terms "antagonist" and "inhibitor" are considered to be synomous and can be used interchangeably throughout the disclosure. The "antagonist" compounds of the invention may be administered together with a typical or atypical anti-CNS disorder drug, such as an antipsychotic drug. Typical antipsychotics include: haloperidol, fluphenazine, perphenazine,

chlorpromazine, molindone, pimozide, trifluoperazine and thioridazine, thiadiazole, oxadiazole and others. Atypical antipsychotics include: clozapine, risperidone, olanzapine, sertindole, M100907, ziprasidone, seroquel, zotepine, amisulpride, iloperidone, phenelzine and others. Typical antidepressant and anti-anxiety agents include: heterocyclic antidepressants (TCAs, tetracyclics, and the like), SSRIs, mixed serotonin and norepinephrine reuptake inhibitors, dopamine reuptake inhibitors and MAOIs. The antagonists may also be used to treat individuals for whom the above drugs are contraindicated. The present invention also provides a method for the treatment or prevention of schizophrenia, bipolar disorder, or other CNS disorders without concomitant therapy with other antipsychotic, antidepressant, anti-anxiety, or other drugs, in a patient who is non-responsive. The antipsychotic, antidepressant, anti-anxiety, or other drugs may be administered at a subtherapeutic doses, i.e., at a lower dose than the dosage that is typically used for treatments with the above drugs alone. Drugs used for the treatment of schizophrenia, bipolar disorder, depression, and other CNS disorders, that are either recognized as a DAO or DDO inhibitor or that inherently act as an inhibitor of DAO or DDO are specifically excluded from the definition of DAO or DDO "antagonist" and may be specifically excluded from the present invention. Further, any molecule, compound or drug disclosed herein may be specifically excluded from the invention.

Detail Description Paragraph - DETX (502):

[0810] Validated polymorphisms (occurring at a frequency of >5% in the general population) have been discovered in the DAO gene (SEQ ID NO: 1). These polymorphisms, also referred to as Biallelic markers, are represented by SEQ ID NOs: 23-26 and by numbers 24/1443-126, 24/1457-52, 27/93-181, and 24/1461-256, respectively, wherein the polymorphic base is located at position 24. Polynucleotides comprising amplicons and microsequencing primers for detecting each DAO biallelic marker of the invention are described in SEQ ID NO: 1. As shown in FIG. 6, Marker 27-93/181(SEQ ID NO: 25) and 24-1461/256 (SEQ ID NO: 26) have been determined to be significantly associated with schizophrenia p=0.0066 and 0.0111, respectively. Markers of the invention can be further used to determine if an individual is at risk for schizophrenia, as demonstrated in FIG. 6, as well as other related CNS disorders, preferably depression and bipolar disorder.

Claims Text - CLTX (11):

10. A method of diagnosing, detecting a predisposition to or susceptibility to schizophrenia, depression or bipolar disorder in a subject, comprising (a) obtaining a nucleic acid sample from said subject; and (b) determining the identity of a nucleotide at a DAO-related polymorphism, or the complement thereof in said biological sample.

Claims Text - CLTX (14):

13. A method of identifying a candidate molecule for the treatment of a CNS disorder, said method comprising: (a) contacting a DAO or DDO polypeptide or a biologically active fragment thereof with a test compound; (b) determining whether said compound (i) binds to said polypeptide, or (ii) inhibits the activity of said polypeptide; and (c) if said compound binds to said polypeptide or inhibits said polypeptide, administering said compound to an animal model of schizophrenia, depression or bipolar disorder, wherein a determination that said compound ameliorates a characteristic representative of CNS disorder in said animal model indicates that said compound is a candidate molecule for the treatment of a CNS disorder.

PGPUB-DOCUMENT-NUMBER: 20030162825

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030162825 A1

TITLE: D-amino acid oxidase inhibitors for learning and memory

PUBLICATION-DATE: August 28, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Heefner, Donald L.	Hudson	MA	US	
Currie, Mark G.	Sterling	MA	US	
Rossi, Richard Filip JR.	Norton	MA	US	
Zepp, Charles M.	Hardwick	MA	US	

APPL-NO: 10/ 292368

DATE FILED: November 12, 2002

RELATED-US-APPL-DATA:

non-provisional-of-provisional 60332343 20011109 US

US-CL-CURRENT: 514/419, 514/290 , 514/423 , 514/461

ABSTRACT:

Methods and pharmaceutical compositions which inhibit the activity of D-amino acid oxidase (DAO) are disclosed. Inhibition of DAO improves memory, learning and cognition in individuals suffering from neurodegenerative diseases such as Alzheimer's, Huntington's or Parkinson's diseases; the methods and pharmaceutical compositions which inhibit the activity of DAO also improve cognitive dysfunctions associated with aging and improve catatonic schizophrenia. Several genera of heterocycle-2-carboxylic acids are disclosed as DAO inhibitors.

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority from U.S. provisional application, serial No. 60/332,343, filed Nov. 9, 2001, the entire disclosure of which is incorporated herein by reference.

---------- KWIC ---------

Detail Description Paragraph - DETX (3):

[0031] The present invention relates to methods and pharmaceutical compositions which inhibit the activity of DAO, thereby improving memory, learning and cognition in individuals suffering from neurodegenerative diseases such as Alzheimer's, Huntington's or Parkinson's diseases; the methods and pharmaceutical compositions which inhibit the activity of DAO also improve cognitive dysfunctions associated with aging and improve catatonic schizophrenia. DAO inhibitors can also be used in conjunction with therapy involving administration of D-serine or an analog thereof, such as a salt of D-serine, an ester of D-serine, alkylated D-serine, or a precursor of D-serine, or can be used in conjunction with therapy involving administration of

antipsychotics, antidepressants, psychostimulants, and/or Alzheimer's disease therapeutics. Examples of disorders that can be treated by the methods of the invention include schizophrenia, autism, **depression**, benign forgetfulness, childhood learning disorders, close head injury, and attention deficit disorder.

Detail Description Paragraph - DETX (51):

[0079] If desired, a pharmaceutical composition containing one or more of the subject DAO inhibitors can be administered to a patient suffering from schizophrenia along with, or in sequence with, a drug for treating schizophrenia (e.g., olanzapine, clozapine, haloperidol, and the like). Similarly, the subject DAO inhibitors can be used in combination with, or in sequence with, other antipsychotics (e.g., "typical," "atypical," and depot antipsychotics for treating schizophrenia and other psychotic conditions), psychostimulants (for treating attention deficit disorder, **depression**, or learning disorders), or Alzheimer's disease therapeutics (for treating Alzheimer's disease). Such pharmaceutical compositions and methods for conjoint therapies are included within the invention.

PGPUB-DOCUMENT-NUMBER: 20030104903

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030104903 A1

TITLE: Shift control apparatus for transmission

PUBLICATION-DATE: June 5, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Kurabayashi, Masahiko	Tokyo		JP	

APPL-NO: 10/ 308997

DATE FILED: December 4, 2002

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
JP	P. 2001-371106	2001JP-P. 2001-371106	December 5, 2001

US-CL-CURRENT: 477/48

ABSTRACT:

A shift control apparatus of a transmission for a vehicle having an input shaft driven by an engine and an output shaft connecting with a drive wheel for automatically changing a speed ratio between the input shaft and the output shaft, comprises accelerator pedal operating amount detecting means for detecting an operating amount of an accelerator pedal, road gradient detecting means for detecting a gradient of a road on which the vehicle travels, vehicle speed detecting means for detecting a vehicle speed, kick-down mode establishing means for establishing a kick-down mode when the operating amount of the accelerator pedal exceeds a threshold value and control means for changing the threshold value based on the road gradient and the vehicle speed.

---------- KWIC ---------

Detail Description Paragraph - DETX (27):

[0041] At a step S4, an accelerator pedal operating amount for judging the kick-down, that is, a kick-down threshold value DAo of the accelerator pedal depression amount, is established based on the vehicle speed V which is read at the step S2 and the road gradient Ri calculated at the step S3. The kick-down threshold value DAo is obtained by reference to a table stored in a memory of the CVT control unit 29. An example of the kick-down threshold value DAo is shown in FIG. 5. As shown in the drawing, the kick-down threshold value DAo is established such that as the road gradient increases from an even road, the accelerator pedal operating amount Ao for establishing the kick-down mode becomes large. On the other hand, the kick-down threshold value DAo is established such that as the road gradient decreases from an even road, the accelerator operating amount Ao for establishing the kick-down mode becomes small.

Detail Description Paragraph - DETX (28):

[0042] Next, at a step S5, it is judged whether or not the kick-down mode is permitted to be established by comparing the accelerator pedal operating amount

Ao with the kick-down threshold value DAo. If a vehicle driver depresses the accelerator pedal by more than the threshold value DAo, the program goes to a step S6 where the kick-down mode is permitted to be established. Then, at a step S7 a kick-down continuation flag is set and at a step S8 the kick-down mode is established. On the other hand, the depression amount of the accelerator pedal of the driver is less than the threshold value DAo, the program goes to a step S9 where the kick-down mode is not permitted and the program returns to START.

Detail Description Paragraph - DETX (32):

[0046] On the other hand, if the depression amount of the accelerator pedal by the driver is smaller than the threshold value DAo, the program goes to a step S13 where the kick-down mode is permitted to be canceled. Then, at a step S14 the continuation flag is canceled and at a step S15 the kick-down mode is canceled and the transmission control returns to the regular running mode.